

Notice of Allowability

Application No.

10/690,146

Examiner

Frantz F. Jules

Applicant(s)

WANG ET AL.

Art Unit

3617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 05/03/2004.
2. ☒ The allowed claim(s) is/are 1-4 and 6-16.
3. ☐ The drawings filed on _____ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☒ to Paper No./Mail Date 05032004.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

REASON FOR ALLOWANCE

1. Iarrera, and Monroe et al discloses various types of wheel end assembly comprising a bearing shaft having an inboard end and an outboard end, a wheel hub mounted onto said outboard end of said bearing shaft, a detachable outboard joint mounted onto said inboard end of said bearing shaft, and a wheel bearing mounted onto said bearing shaft between said inboard end and said outboard end, said wheel bearing including a knuckle flange having an inner diameter that defines an inboard outer race and an outboard outer race, an inboard inner race and an outboard inner race supported on said bearing shaft, and a plurality of bearing elements, a first portion of said bearing elements being positioned between said inboard outer race and said inboard inner race and a second portion of said bearing elements being positioned between said outboard outer race and said outboard inner race; and an inboard bearing ring, said inboard inner race being formed within said inboard bearing ring, said inboard end of said bearing shaft including a flange portion, said flange portion providing a support to keep said inboard bearing ring, and said wheel bearing positioned onto said bearing shaft and inducing a pre-load into said wheel bearing such that said pre-load is maintained on said wheel bearing when said outboard joint is removed from said wheel end assembly. Bertetti'075, and Beesley et al disclose various types of wheel end assembly comprising rings that are coupled to the shaft using spline connection between the inner surface of the ring and the shaft. However, none of the references of record suggests a wheel end assembly wherein the housing inner surface includes a polygon shape for engaging an outer surface of an inboard bearing ring having a

polygon shape in the manner defined in the instant claims 1, and 11 and in combination with other limitations of the claims so as to create a locking engagement between the bell housing and the inboard bearing ring. Therefore, claims 2-4, 6-10, 12-16, depending therefrom, are considered to be allowable.

Conclusion

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frantz F. Jules whose telephone number is (703) 308-8780. The examiner can normally be reached on Monday-Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph S. Morano can be reached on (703) 308-0230. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Frantz F. Jules
Examiner
Art Unit 3617

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